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Patent
Docket No.: 54046US012

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:
Raymond Chiu et al.

Serial No.: Unknown
Filed: Herewith
For: METHOD FOR PRECISE
MOLDING AND ALIGNMENT
OF STRUCTURES ON A
SUBSTRATE USING A MOLD

Group Art Unit: --

Examiner: --

PRELIMINARY AMENDMENT

Commissioner for Patents and Trademarks
Washington, D.C. 20231

Dear Sir:

Preliminary to the examination of the above-identified application, please enter the following amendments.

In the Specification

After the title and before the words "Technical Field," please add the following paragraph:

--This application is a continuation of Application No. 09/779,207, filed February 8, 2001, which is a divisional of Application No. 09/219,803, filed December 23, 1998, now U.S. Patent No. 6,247,986.--

In the Claims

Please cancel claims 1-19 and add new claims 20-31 as follows:

20. (New) A process for forming and aligning microstructures on a patterned substrate comprising the steps of:
providing a mixture comprising a ceramic powder disposed in a visible light curable binder;

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Date <u>October 5, 2001</u>	Signed: <u>C. P. Senter</u>

providing a mold comprising a patterned surface comprising a plurality of microstructures thereon;

placing the mixture between the patterned substrate and the patterned surface of the mold;

stretching the mold to align a portion of the patterned surface of the mold with a portion of the patterned substrate;

curing the curable binder to a rigid state adhered to the substrate; and removing the mold.

21. (New) The process of claim 20, wherein the curable binder is curable using blue light.

22. (New) The process of claim 21, wherein the mixture further comprises titania particles.

23. (New) The process of claim 20, wherein the step of placing the mixture between the patterned substrate and the patterned surface of the mold comprises coating the patterned substrate with the mixture and brining the patterned surface of the mold in contact with the mixture.

24. (New) The process of claim 20, wherein the step of curing forms hardened material comprising structures that substantially replicate the microstructures of the patterned surface of the mold.

25. (New) The process of claim 24, wherein the hardened material further comprises a land between the structures and the substrate.

26. (New) A process for forming and aligning microstructures on a patterned substrate comprising the steps of:

placing a mixture comprising a curable material between the patterned substrate and a patterned surface of a mold, the patterned surface of the mold having a plurality of microstructures thereon;

heating the mold to align a portion of the patterned surface of the mold with at least a portion of the patterned substrate;

curing the curable material to a rigid state adhered to the substrate; and

removing the mold to leave hardened structures of the mixture aligned with the pattern of the substrate, the hardened structures substantially replicating the microstructures of the patterned surface of the mold.

27. (New) The process of claim 26, wherein the mixture comprises a ceramic powder disposed in a curable binder.

28. (New) The process of claim 26, wherein the patterned substrate comprises a pattern of transparent conductive electrodes disposed on glass.

29. (New) The process of claim 26, wherein the hardened structures further comprise a land portion.

30. (New) A process for forming and aligning microstructures on a patterned substrate comprising the steps of:

coating a mixture comprising a curable material onto the patterned substrate;

bringing a patterned surface of a mold into contact with the curable material coated onto the substrate, the patterned surface of the mold having a plurality of microstructures thereon;

stretching the mold to align a portion of the patterned surface of the mold with at least a portion of the patterned substrate;

curing the curable material to a rigid state adhered to the substrate; and removing the mold to leave hardened structures of the mixture aligned with the pattern of the substrate, the hardened structures substantially replicating the microstructures of the patterned surface of the mold.

31. (New) A process for forming and aligning microstructures on a patterned substrate comprising the steps of: